

particulars of the subcombination. Irrespective of whether the subcombination has utility either by itself or in other different relations, a two way distinctness which was required has not been shown.

Moreover, the Examiner's allegation that the groups are classified separately is not conclusive of the independence of the invention. The classification system is primarily arranged for convenient searching and not necessarily to distinguish separate inventions. Applicants submit that Groups I and II are not distinct as the Examiner has alleged, but rather represent one single inventive concept warranting examination in a single application. Applicants submit that, in order to consider the invention herein claimed, the subject matter of the indicated Groups I-II should be considered together.

Finally, MPEP§821.04 provides that if Group I, claims 11-27, drawn to coaxial cable were found **allowable**, pursuant to procedures set forth in Official Gazette notice dated March 26, 1996 (1184 O.G. 86), Group II, claims 28-40, drawn to the method of making the coaxial cable which was withdrawn from consideration as a result of restriction requirement should be **rejoined** and the restriction requirement should be withdrawn.

In view of the above, withdrawal of the restriction requirement is respectfully requested.

The Invention

The present invention is directed to a dry, water resistant coaxial cable comprising: a) a metal core conductor element;

b) a dielectric element around the core conductor based on three layers, comprising:

- i) a first layer comprising a polymer mixed with an adhesive component and applied onto the core conductor as a uniform film;
- ii) a second layer comprising a cellular high expansion polymer on the first layer; and
- iii) optionally, a third layer comprising a reinforcement layer on the second layer;

- c) a second external conductor surrounding the dielectric element;
- d) a second conductor element on the second external conductor,
comprising a water penetration protective element; and
- e) a protective cover surrounding the second conductor element.

Moreover, as disclosed in the Applicants' specification on page 1, lines 20-25, the prior art discloses the use of fillers such as oil dispersed water insoluble materials and stabilizers based on glycol, ester acetate, ethylene glycol, ester or ethylene glycol ester acetate. Although these materials provide adequate water protection, the materials have oily adhesive and or characteristic properties which complicate the use of solvents when cleaning the cable.

In avoiding the preceding prior art problems, Applicants provide on page 2, lines 21-25, a technique through the design of a dry, water resistant coaxial cable, i.e., **without** a filler. Rather, a water penetration prevention element is incorporated which permits installation, preparation and connection of the coaxial cable in the absence of using solvents or other cleaning agents. The water penetration prevention element is between the second external conductor 15 (made of metal or combination thereof) and protective cover 17.

Furthermore, Applicants overcame the water penetration problems of the prior art by developing a cable comprising:

- a) a first layer conductor comprising the adhesive and serves as a moisture blocking element and minimizes the air bubbles that contribute to the instability of the characteristic impedance and structural return losses (SRL). The first layer links the conductor to the dielectric element;

- b) a second layer which is physically expanded by gas injection and comprises a swelling agent. The cellular expansion polymer lowers the dielectric constant through the reduction of polymer mass per length time; the swelling agent controls the swelling material;

- c) a third layer which insures the surface uniformity of the intermediate layer and enhances adherence of the aluminum pipe onto the dielectric. The third layer provides water tightness to the swelling dielectric material, improves dielectric surface appearance and permits better control on the dielectric swelling process;